

passive heat dissipation with the distributed heat at stage 208 and enabling active heat dissipation with the provided coolant at stage 210, as described above with reference to FIGS. 1A-3.

[0043] Embodiments of the heat spreader 108 may be incorporated into myriad larger and/or more complex systems 300, a representative one of which is shown schematically in FIG. 5. As shown in FIG. 5, the system 300 can include a processor 301, a memory 302, input/output devices 303, and/or other subsystems or components 304. The heat spreader 108 may be included in any of the components shown in FIG. 5. The resulting system 300 can perform any of a wide variety of computing, processing, storage, sensor, and/or other functions. Accordingly, representative system 300 can include, without limitation, computers and/or other data processors, for example, desktop computers, laptop computers, Internet appliances, and hand-held devices (e.g., palm-top computers, wearable computers, cellular or mobile phones, multi-processor systems, processor-based or programmable consumer electronics, network computers, mini computers). Another representative system 300 can include cameras, light sensors, servers and associated server subsystems, display devices, and/or memory devices. Components of the system 300 may be housed in a single unit or distributed over multiple, interconnected units, e.g., through a communications network. Components can accordingly include local and/or remote memory storage devices and any of a wide variety of computer-readable media, including magnetic or optically readable or removable computer disks.

[0044] Specific embodiments of the technology have been described above for purposes of illustration. However, various modifications may be made without deviating from the foregoing disclosure. In addition, many of the elements of one embodiment may be combined with other embodiments in addition to or in lieu of the elements of the other embodiments. Accordingly, the technology is not limited except as by the appended claims.

I/we claim:

1. An electronic device, comprising:
a heat source;

a heat spreader having a first surface and a second surface in contact with the heat source, the first surface having a surface area greater than that of the heat source, wherein the heat spreader is configured to remove heat from the heat source via the first surface and distribute the removed heat to the second surface of the heat spreader;

a housing panel spaced apart from the first surface of the heat spreader by a gap; and

an air mover proximate the heat spreader, the air mover being positioned to force cooling air through the gap between the housing panel and the first surface of the heat spreader in a direction generally tangential to the first surface of the heat spreader.

2. The electronic device of claim 1 wherein:

the housing panel is a first housing panel;

the gap is a first gap;

the electronic device further includes a second housing panel opposite the first housing panel;

the second housing panel is separated from the second surface of the heat spreader by a second gap; and

the air mover is positioned to force a portion of the cooling air through the second gap between the second housing panel and the second surface of the heat

spreader in a direction generally tangential to the second surface of the heat spreader.

3. The electronic device of claim 1 wherein:

the housing panel is a first housing panel;

the gap is a first gap;

the electronic device further includes a second housing panel opposite the first housing panel;

the second housing panel is separated from the second surface of the heat spreader by a second gap;

the air mover is positioned to force a portion of the cooling air through the second gap between the second housing panel and the second surface of the heat spreader in a direction generally tangential to the second surface of the heat spreader; and

the heat source at least partially obstructs a flow of the cooling air through the second gap.

4. The electronic device of claim 1 wherein:

the heat spreader includes a first portion and a second portion extending away from the first portion;

the first portion is generally corresponding to the heat source;

the second portion is offset from the heat source; and

the second portion is generally aligned with a flow direction of the cooling air from the air mover.

5. The electronic device of claim 1 wherein:

the heat spreader includes a first portion and a second portion extending away from the first portion;

the first portion is generally corresponding to the heat source and is configured to conduct the removed heat from the heat source to the second portion in a first direction; and

the air mover is positioned to force the cooling air to flow past the second portion in a second direction generally perpendicular to the first direction.

6. The electronic device of claim 1 wherein the heat spreader is generally aligned with the heat source and with a flow direction of the cooling air from the air mover.

7. The electronic device of claim 1 wherein:

the heat spreader includes a first portion, a second portion extending away from the first portion in a first direction, and a third portion extending away from the first portion in a second direction opposite the first direction;

the first portion is generally corresponding to the heat source;

the second and third portions are offset from the heat source; and

the second portion is generally aligned with a flow direction of the cooling air from the air mover.

8. The electronic device of claim 1 wherein:

the air mover is a first air mover;

the electronic device further includes a second air mover;

the heat spreader includes a first portion, a second portion extending away from the first portion in a first direction, and a third portion extending away from the first portion in a second direction opposite the first direction;

the first portion is generally corresponding to the heat source;

the second and third portions are offset from the heat source;

the second portion is generally aligned with a flow direction of the cooling air from the first air mover; and